The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society
https://lvaas.org/
https://www.facebook.com/lvaas.astro
October 2023
Volume 63 Issue 10

A celestial experience awaits astronomy enthusiasts on October 14th at the Da Vinci Science Center. The "Science Under the Stars" event, hosted by the Da Vinci Science Center, promises to be an out-of-this-world celebration for visitors of all ages, and LVAAS will be a part of it!

I am reaching out to our dedicated and passionate LVAAS community for support. Whether you have experience guiding curious minds through the lens of a telescope, or a talent for engaging with the public, we need your expertise and enthusiasm! We are seeking volunteers to assist with various activities during the event, including operating telescopes, overseeing our information table, and answering questions from attendees. This is a wonderful opportunity to share your passion for astronomy, connect with fellow members, and inspire the next generation of stargazers. If you're interested in volunteering, please let us know. Your support will be instrumental in making this event a stellar success!

Activities Galore! The event's activities lineup offers something for everyone. Are you keen to safely witness solar wonders? Eclipse glasses are up for grabs at the gift shop, while supplies last. You can also craft your very own pinhole viewer between 10 a.m. - 12 p.m.

There will be solar telescopes set up, allowing visitors to sneak a peek at our incredible sun. Moreover, with the help of LVAAS members' expertise, attendees can engage in day and night sky viewings. The stars, planets, and perhaps some deep-sky objects await your gaze.

Younger attendees, or those young at heart, can experience the thrill of creating their own stomp rockets and launching them skyward, or even crafting their pocket solar system. The curious can explore the cosmos through virtual reality, diving deep into the wonders of our solar system from 10 a.m.- 5 p.m.

For those with visual impairments, tactile books will be made available, ensuring that everyone can partake in the wonder of our universe.

Star-studded Guest Appearances

Astronaut Jared Isaacman will grace the event, ready to answer eager questions at 2:30 p.m. Additionally, don't miss the stellar panel discussion at 6 p.m., featuring space experts and amateur astronomers. LVAAS's own Eric Loch will join Dr. Josh Pepper from Lehigh University, and Karen Perez from UPenn to dive deep into topics about our awe-inspiring solar system.

LVAAS's Special Contributions

The LVAAS team will be a significant force at the event, equipped with telescopes tailored for various celestial objects, from our nearest star, the sun, to distant planets and other night-sky objects. Knowledgeable LVAAS members will be on hand to field queries and enhance the stargazing experience.

Admission Details

Your ticket to the stars is priced at $15.95 from 10 a.m.- 3 p.m. For those planning to visit later, a reduced entry fee of $5 is available from 3 p.m.- 9 p.m. Remember, all the activities are included with general admission, or with a Da Vinci Science Center membership.

Mark your calendars for this celestial celebration, and let's explore the universe together under the stars!

A table with all of the events Da Vinci has planned is below.

The Da Vinci Science Center
3145 Hamilton Blvd Bypass
Allentown, PA 18103

Program	Time
Eclipse Pinhole Viewer Activity	10 a.m. - 12 p.m.
Additional Hands-on Lab Activities	10 a.m. - 5 p.m.
Stomp Rockets Activity	10 a.m. - 6 p.m.
Use the Force Show	11 a.m.
Telescope Viewings (weather permitting)	11 a.m. - 9 p.m.
Solar eclipse viewing window (weather permitting)	12 p.m. - 2:30 p.m.
Astronaut Jared Isaacman Conversation	2:30 p.m.
Panel of Experts Discussion	6 p.m.

Ad Astra!

Mike Huber

Minutes from the LVAAS General Meeting – September 10, 2023

The September 2023 LVAAS general meeting was conducted electronically using an on-line service and at the South Mountain headquarters. Approximately 40 people were in attendance. Director Michael Huber opened the meeting at 7:10 p.m.

Tonight's presentation was "A Field Guide to Deep-sky Objects" given by Charles Bracken. Charles is an astrophotographer and the author of several books about the subject, including The Deep-sky Imaging Primer. He lives in Bucks County, Pennsylvania. If you've ever wondered what you're looking at in astrophotos, this talk will help to explain the different types of Deep-sky Objects (DSO), what they are made of, how far away they are, and how we image them.

Charlie started by giving a history of astroimaging dating back to an 1895 image of the California Nebula done by E. E. Barnard, using a 6" refractor with 6 hours of exposure. Early imaging was done with film that only had a 1-3% quantum efficiency. Modern electronic cameras have a quantum efficiency of over 60%. Records of DSO are kept in multiple catalogs. Most DSO are given an NGC or IC number for New General Catalog or Index Catalog, respectively, and many are given a Messier number.

Galaxies can be seen face on, or edge on. They can be categorized as spiral, elliptical or irregular and are formed after collisions of galaxies. It is possible to see nebulae within the relatively nearby Andromeda and Triangulum Galaxies. Galaxies have hundreds of billions of stars.

Within our Milky Way galaxy we can see both globular clusters and open clusters of stars. Open clusters contain tens or hundreds of stars and may be better seen with binoculars or a low power telescope. Globular clusters can contain hundreds of thousands of stars.

Ionized gas emits light at specific wavelengths and gives us emission nebulae and planetary nebulae. In an emission nebula, UV light from a young, bright star hits a hydrogen atom and knocks an electron off, which emits a photon of light at a specific wavelength. A mapped color image can be created by using narrowband filters that allow a narrow wavelength of light to pass, then assigning colors to the wavelength emitted by the atoms, e.g. hydrogen is assigned red, oxygen is assigned green and sulfur is assigned blue. Planetary nebulae are created by expanding shells of gas that are ejected by a star as it runs out of fuel for fusion. Wolf-Rayet stars create a nebula as the expanding shells of gas slam into surrounding dust. Another example are supernovae remnants, which are best imaged using narrowband filters.

Charlie also discussed reflection nebulae that are created when clouds of interstellar dust reflect the light of nearby stars. A prime example of this is the Pleiades (M45) which is visible without a telescope. He also discussed dark nebulae which are created by molecular gas blocking light from the stars behind.

Charlie finished by showing an image of Rho Ophiuchi which includes examples of all DSO. Unfortunately he disappointed the audience by pointing out that Rho Ophiuchi is a DSO in the Southern Hemisphere and not visible in the Allentown area. He finished his talk with a quote, “Unless you are looking at a galaxy, you are looking within our galaxy.” A break was taken at 8:20 p.m.

The Business Meeting resumed at 8:40 p.m.

Nominating Committee: Bill Dahlenburg

As chairman of the Nominating Committee, Bill presented a slate of nominees for the upcoming election, then opened up the floor to nominations from the members present. There were none further and so the nominations were closed. The slate of nominees are:

Director - Benjamin Long

Assistant Director - Kyle Kramm

Secretary - Joe Zitarelli

Treasurer - Kari Fobe

Membership: Rich Hogg

- The following members completed their second readings and are now full members:
  Sandra and Paul Szalinski (family membership)

- The following members completed their first readings:
  Bill and Ruth Lodder (family membership)
  Michael Manke
  Paul Marsh
  Daniel and Lauren Mortensen (family membership)

- The following members have previously completed a first reading and are still eligible to complete a second reading to become full members:
  Andy and Tori Hernandez (family membership)
  Karen Houser
  Michael Vila
  Chris Webb (family membership with son Johnny)
  Steve and Linda Zieniewicz (family membership)

Director’s Comments: Mike Huber

- The Black Forest Star Party is next weekend at the Cherry Springs State Park.
- The Da Vinci Science Center will be holding an Eclipse Event on October 14 for the partial solar eclipse. They are asking for volunteers to help. LVAAS frequently works closely with

Da Vinci and this is a good way to get involved. LVAAS will be raffling off a brand new ZWO SeeStar All-in-one astrophotography telescope. Proceeds will go towards the roof replacement fund for the South Mountain headquarters as well as other renovations.

- We are looking for volunteers to chair certain committees. Please contact Mike Huber if you are interested. The committees are:
    - Member Services - runs the Red Shift Store
    - Star Party Coordinator

Technology: Rich Hogg

- Rich is looking for help with running the audiovisual portion of the general meetings. Please contact him if you are willing to help.

Astroimaging: Tom Duff

- The most recent Astroimaging meeting was September 9.
- The next meeting is scheduled for October 14, but that may be canceled or moved because it conflicts with the Da Vinci Science Center's Eclipse Event.

Library: Dave Raker

- Dave completed his inventory of our library. We have over 900 books and about 100 DVDs
- There are books that are for sale on the table in the library. Books will also be offered for sale at our monthly star parties.

Stargazers: Kyle Kramm

- The next Stargazers Meeting will be held on October 13 at 7 p.m. at South Mountain. All members are welcome.

Next General Meeting:

- The next general meeting will be held on Sunday October 8 at 7 p.m.

The September 2023 General Meeting was recorded.

The meeting was adjourned at approximately 9:12 p.m.

Submitted by Joe Zitarelli, Secretary

OCTOBER 14th SOLAR ECLIPSE EVENT

AT DA VINCI SCIENCE CENTER

COME JOIN US!

LVAAS is partnering with the Da Vinci Science Center for a "Science Under the Stars" event on October 14th, and we need your help! We will be viewing the solar eclipse and sticking around to view the night sky - a great day of astronomy for sure!

If you're not traveling to the path of annularity, why not come out and share the day with us?

Here are some details:

- **October 14th, 10 a.m. to 9 p.m., rain or shine**
- **Both solar and nighttime observing**
- **LVAAS Table inside the cafeteria**
    - **Display items**
- **Panel discussion from 6 - 7 p.m. with Dr. Josh Pepper from Lehigh University, our own Eric Loch, LVAAS amateur astronomer and Karen Perez, astrophysics graduate student from the University of Pennsylvania.**

More information can be found on the Da Vinci Science Center's website

LVAAS could use your help with any of the following:

- **Help staff our indoor display**
- **Set up your solar telescope and assist guests with viewing**
- **Set up your night viewing telescope and assist guests with viewing**
- **Provide backup to our solar viewers so they can take breaks**
- **Sharing the awesomeness of our hobby with a great bunch of people**

We appreciate any time that you can volunteer. Even if it's only for and hour or two, we would love to have your help. This is a great opportunity to share your energy, experience and knowledge with guests of the Da Vinci Science Center.

For more information, or to volunteer to help, please contact LVAAS Educatio Director Blaine Easterwood: blaine@ieee.org

ALL MEMBERS! LVAAS NEEDS VOLUNTEERS TO KEEP THE SOCIETY RUNNING!

The benefits that you, as an LVAAS member, enjoy are not guaranteed. They are provided due to the generous sacrifice of time and labor contributed by our dedicated volunteers. If no one steps up to share the work, these benefits will start to diminish in quantity and quality, and may vanish altogether.

If you are a member, old or new, and have never volunteered to help, it's easy! Just contact either Director Mike Huber, or any chairperson/director on the contacts page of our website. "Many hands make light work" so please lend a hand to help keep your astronomy society vital! Any time you can give will be greatly appreciated. Volunteer!

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

October: John Conrad (via Zoom) will speak on "NEOs: A Clear and Present Danger from Space."
November; (tentative) author Dava Sobel (via Zoom) will speak topic TBA.
December (Holiday Party) (tentative) LVAAS member Linda Prince on "Astronomical Sights in New York."
* Please contact astrosandy@gmail.com if you have ideas for speakers, or would like to volunteer yourself!

Via France Kopy, Newsletter Editor

Still looking ... Do you own a camera or smartphone and usually attend LVAAS functions? Would you like to help LVAAS and our newsletter as a volunteer? *The Observer* is in need of members to act as photographers in an informal capacity to capture the action at various society events, both public and members-only. You will receive a published credit under each of your photographs, and a mention in the black box on the last page of every newsletter. Please contact me at editorlvaas@gmail.com if you'd like to volunteer or for more information.

Via Dave Raker, Society Librarian

Several books have recently been added to our collection:

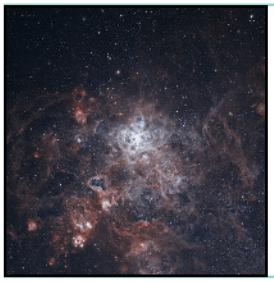
Smithsonian Nature Guide: Stars and Planets by Robert Dinwiddie
The Short Story of the Universe by Gemma Lavender
No Shadow of a Doubt (Einstein and the Eclipse) by Daniel Kennefick
The Little Book of Exoplanets by Joshua Winn

Via Earl Pursell

Please read about LVAAS member **Dr. Terry Pundiak**'s astronomy outreach in nearby Easton PA here!

Via Earl Pursell, UACNJ Liason

UACNJ provides free public programs on-site at our Observatory in Jenny Jump State Forest, New Jersey from April through October on Saturday evenings. To view the program line-up please visit uacnj.org.



Cover Image: **Tarantula Nebula (NGC 2070) Imager: Peter Detterline**

Located in the Large Magellanic Cloud some 160,000 lights-years away, this is one of the most spectacular star-forming regions known. If it was as close as the Orion Nebula (1,600 lights-years away), here on Earth, it would cast shadows like the Moon.

StellarVue 70, Camera ZWO ASI533 MC, Filter: L-Extreme, Exp: 6 ten minute exposures

Image was captured during Peter's trip to Australia to view the solar eclipse in May 2023.

LVAAS General Meeting

Sunday, October 8 at 7 p.m.

South Mountain Headquarters

"NEOs: A Clear and Present Danger From Space" (via Zoom)

presented by

John Conrad

In this presentation John will discuss all about Near Earth Objects (NEOs), those asteroids and comets that could threaten Earth and mankind in the future, like the "dinosaur-killer" asteroid that did impact the Earth 65 million years ago. Furthermore, we'll describe the International Planetary Defense program, whereby NASA – and other nations' space agencies – are developing what hopefully will be an arsenal of PHA (Potentially Hazardous Asteroids) threat mitigation tools and techniques. You'll learn about NASA's first mitigation test: the DART spacecraft, which recently demonstrated kinetic deflection of a Near Earth Asteroid.

John Conrad followed his childhood interest in space and spaceflight – at the dawn of the Space Age – through Astronautical Engineering degrees from the US Air Force Academy and Purdue University straight into leadership in space programs for the Air Force, NASA, DOE, and industry. Now retired, he gives frequent talks to schools, astronomy clubs, museums, libraries, and other learning venues that draw on his extensive experiences, including: managing satellite rocket launches, designing and operating military and civil spacecraft, data applications in areas such as Earth science and intelligence, and astrodynamics and astronomy

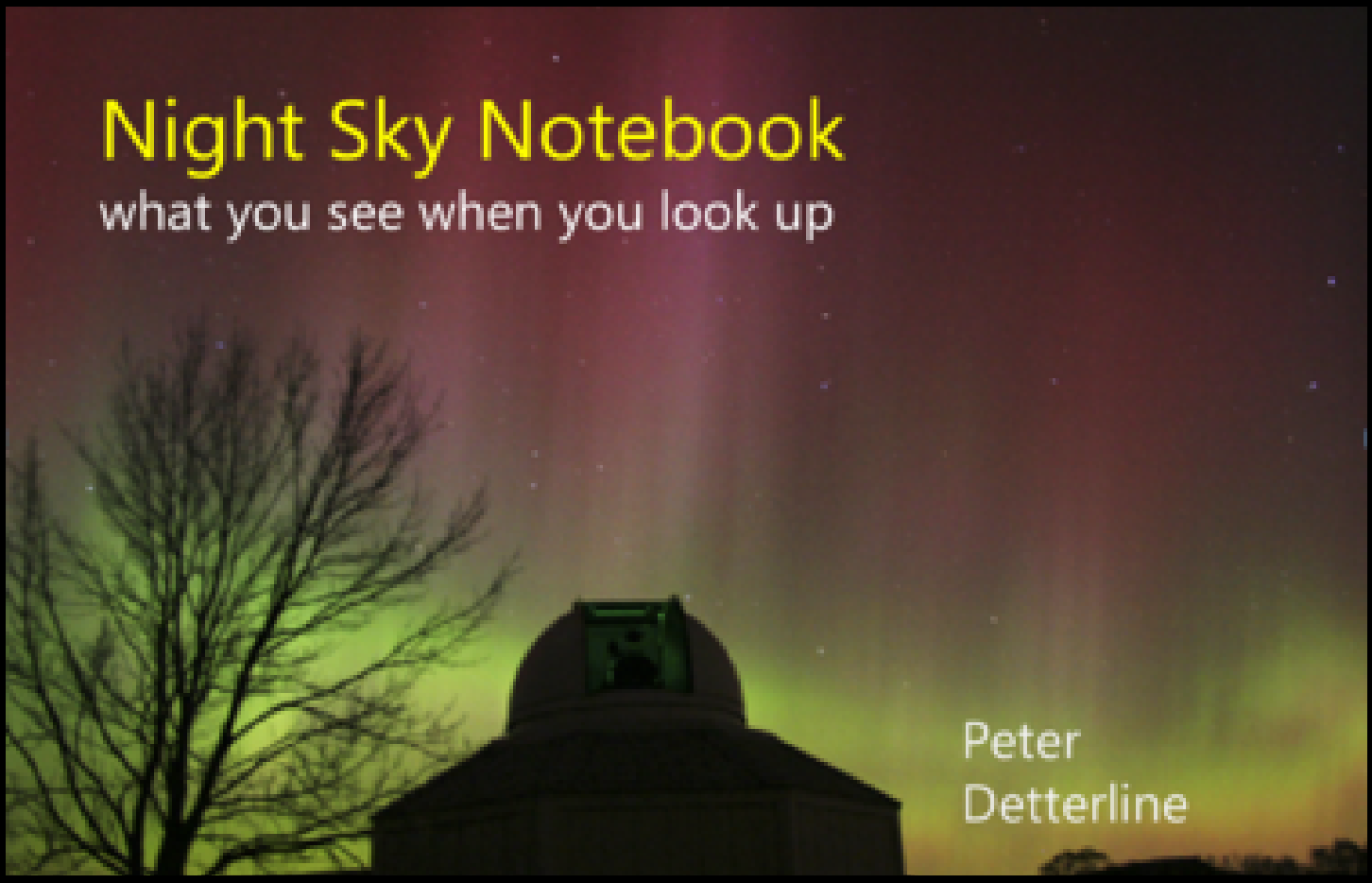
In his role as a NASA Solar System Ambassador, he is able to bring you the latest results from NASA scientists and engineers, providing insights into US progress in exploring space and addressing the most challenging and complex of mankind's problems and pursuits.

Prospective new members who wish to attend the meeting should email *membership@lvaas.org.*

Peter Detterline's

Night Sky Notebook

OCTOBER 2023

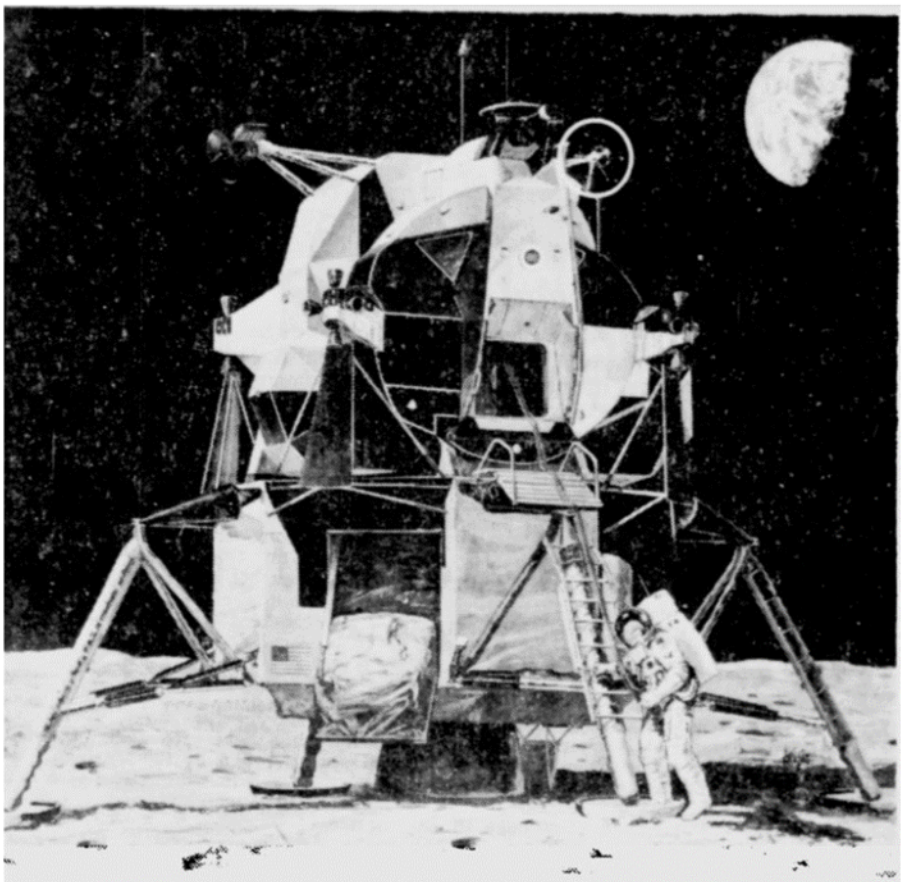


A History of the Kawecki Observatory

By George H. Maurer 1998, revised by Sandy Mesics 2023

The Kawecki Observatory at Pulpit Rock is the only LVAAS observatory that was not constructed by members. Our ownership came about when we became owners of the Pulpit Rock site in 1967.

The observatory is named after Henry Kawecki (7/5/1912-9/28/1973), who was the owner of the observatory and site at the time he donated both the site and the observatory to LVAAS. Kawecki graduated from Massachusetts Institute of Technology in 1934 with a degree in electrochemical engineering. He was the founder and CEO of the Kawecki Chemical Company in Berks County. This company specialized in producing exotic metals. In the early 1950's, there was a great demand for titanium which was difficult to extract from the ore. Through his personal research, he made a breakthrough with a simple, efficient process that produced a great financial gain for the company.

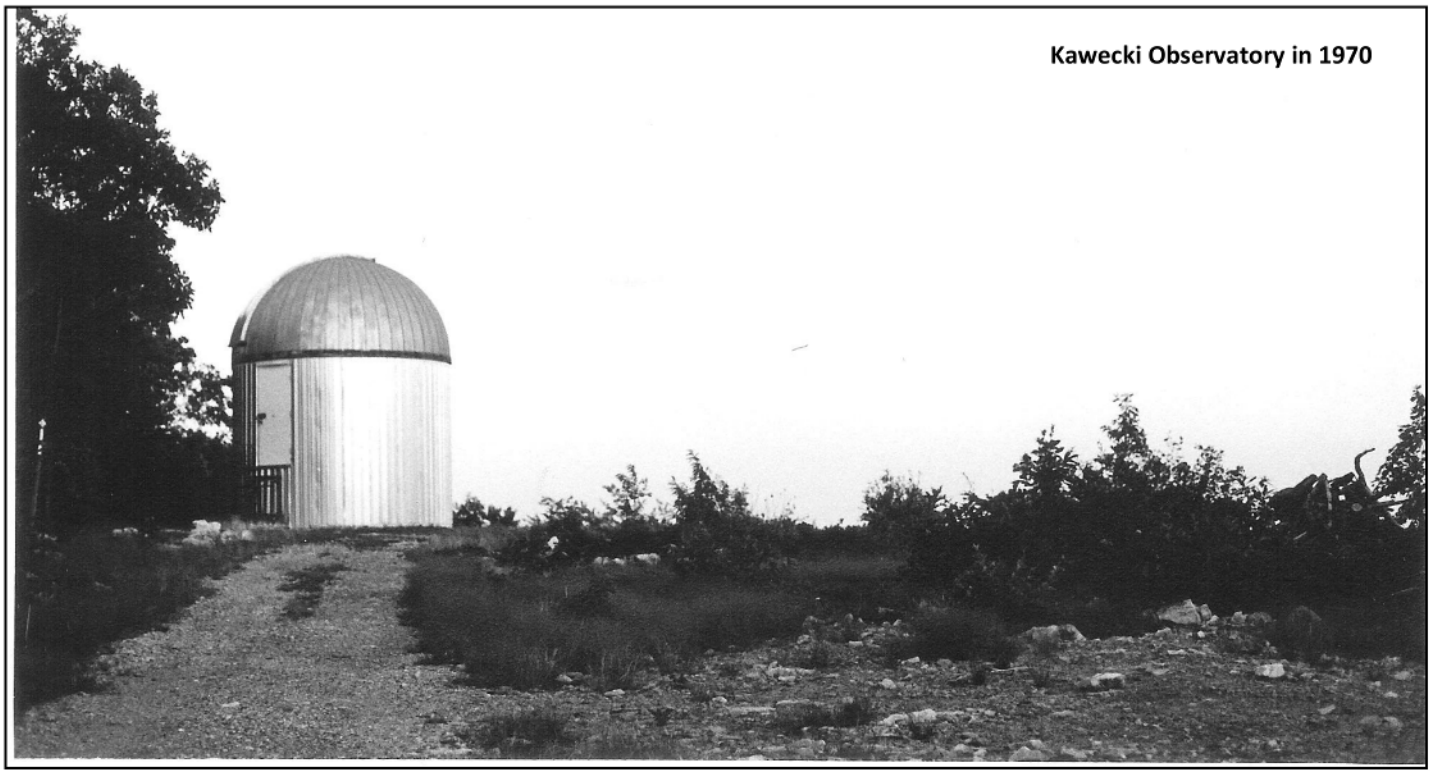


Berks Beryllium on Intrepid

A number of components on the lunar lander Intrepid were made from beryllium supplied by Kawecki-Berylco Industries, Inc., in Muhlenberg Township. Among the more obvious on the Intrepid model shown in this artist's drawing is the "star" antenna at top right of the model (in circle). There are two such antennas and an alignment optical telescope on the exterior of the module and a number of components within the Intrepid made from beryllium. In addition, the astronauts will leave on the moon's surface a nuclear generator made of beryllium supplied by the Berks County industrial firm.

Reading Eagle, Nov. 19, 1969

Mr. Kawecki had been an amateur astronomer as a young man and had made a reflecting telescope. An article he wrote about it was published in the *Scientific American*. In the late 1950s, he purchased a large tract of land on the mountain that included Pulpit Rock and proceeded to build his observatory there. This was done with great difficulty as the only access to the summit was by means of an old and very rugged logging trail. He used a jeep to haul bricks and material to the site. The rugged trail caused the jeep to break down several times during the period of construction. Once the observatory was completed, he used his helicopter to reach the summit from his home at the foot of Pulpit Rock. Electrical power was supplied by a generator.



Kawecki Observatory in 1970

It was in the early part of 1966 that one of our members who lived in the Hamburg area came upon Mr. Kawecki's observatory while hiking along the mountain trail and he reported this to the Society. It was proposed that the Society try to contact the owner, who we did not know at the time, to see if we might visit the observatory and possibly use it occasionally. We were able to contact Mr. Kawecki directly in late August of 1966 and explain our interests. He was quite cordial in his response and invited a group of our members to his home in September 1966 for a discussion.

Henry Kawecki (left) and LVAAS Director Ernie Robson (right) with Kawecki's helicopter.

Mr. Kawecki was quite interested in having his observatory used by an established organization. He noted that a roadway would have to be built to make this practical. He proposed that we obtain a realistic bid from a reliable contractor to determine the cost. This was done and a figure of over $8500. received. Mr. Kawecki offered the Society a proposition that if the membership would raise $3000 in four months' time with a deadline of May first, 1967, he would match it at a rate of two for one and deed 4.5 acres of the summit, including his observatory to the Society. Thanks to the generous contributions of the members, (our treasury could not fund this), the goal of $3000. was met on time with about a 10% surplus. The rest is history.

LVAAS receives deed to Pulpit Rock. L to R: Henry Kawecki, Paul Shenkle, Ernie Robson, unknown

Left: Adding aluminum cladding to the observatory. Right, the 8-inch Spacek refractor.

The observatory was a sturdy brick building and housed a 12.5-inch Cassegrain telescope that was built by Spacek Instrument by Mike Spacek. This instrument was later removed for refurbishment and the 8-inch refractor, also built by Mike Spacek, was installed. Time showed that the building was best suited for the refractor and so it remained. The objective is a Steinheil design that has the flint element in front of the crown. Paul Shenkle, an optical expert in his own

right, had refigured the crown element while working with Mike and he noted that this objective style had also been used by the Brashear firm. Some years later, the optics were refigured by our own expert optician, Bill McHugh.

The brick building was also covered with ribbed aluminum which prevented the brick walls from heating excessively in the sun and also allowed the building to cool down faster after sundown. The fine performance of the 8-inch refractor along with its favorable location has made it a favorite with many of our members.

When LVAAS acquired Pulpit Rock, the site was located in a dark area of the east as shown in photos taken from space satellites. By comparison, the same photo showed the eastern coast, from Maine to Florida as "the great white way!" When the Society held its early star parties there, one member said he had a problem recognizing constellations because of so many stars. Although no longer a true dark sky site, Pulpit Rock still offers a better night sky than most of the surrounding area.

Kawecki went on to advise LVAAS on many matters and was instrumental in having power supplied to the site by Metropolitan Edison. He also helped negotiate with New York-Penn Microwave to supply them with a right-of-way to Pulpit Rock, an agreement that is still in effect today. He was appointed the third advisor in LVAAS history, but at the time of his death while traveling in Australia, the letter informing him of this sat unopened on his desk.

Although LVAAS has always referred to this observatory as the "Kawecki Observatory", Mr. Kawecki modestly declined the name. Following his death in 1973 however, it was formally named the Kawecki Observatory with the approval of his family as a remembrance to him and his generosity.

References

Freyman, A. Berks Beryllium Lands on Moon – On this day in 1969.
https://berksnostalgia.com/berks-beryllium-moon-cancer/

StarWatch

The Saros

The universe operates with a precision that must have left ancient Babylonian astronomers in awe, especially when they discovered the secret to predicting similar solar eclipses, perhaps as early as two millennia before the birth of Christ. The interval is 18 years, 9, 10, 11, or 12 days, depending upon the number of leap year days contained within that period. The Greeks dubbed it the *saros*, which means *a significant quantity or measure*, and indeed, it truly is a prodigious amount of time. If a total solar eclipse occurs today, in 6585 days, another total solar eclipse will happen in the same saros cycle. * Three sequences of time or *drumbeats* must be considered when understanding the saros. The governing pulse is the synodic period of the moon, the interval between successive new or full moons, 29.530588 mean solar days. A solar eclipse can only occur if the moon's phase is new. Luna needs to be located with precision between the Earth and the sun so that its near side is in darkness. A solar eclipse also cannot happen unless the moon is in or near the plane of the Earth's orbit because at least one of its two shadows, the narrowing cone of the umbra (primary shadow) or the expanding shadow cone of the penumbra (secondary shadow) must project towards and reach the Earth's surface. The moon's orbit is tilted to the plane of Earth's orbit by 5 degrees, 9 minutes, so an eclipse can only take place if the moon is at or near a crossing point, called a node, with the Earth's orbit. Two successive crossings of the same node, descending or ascending, occur every 27.212220 days. Finally, because the moon's orbit is an ellipse or oval, the moon must be at a similar distance from the Earth to facilitate the same type of eclipse: total, annular (ringed), or partial. The interim between the Earth's and the moon's sequential similar distances transpires every 27.554551 days and is called the anomalistic period. The saros or repetition of similar eclipses happens when all three intervals beat the same number of whole days. In other words, what whole number "X," when multiplied by the synodic period of 29.530588 days equals what different whole number "Y," when multiplied by the nodical period of 27.212220 days equals what different whole number "Z" when multiplied by the anomalistic period of 27.554551 days yields the same number of whole days. The number of days in 223 synodic months equals the same number of days in 242 nodical months and the same number of days in 239 anomalistic months, which equals 6585 days or 18 years 9, 10, 11, or 12 days. After the October 14 annular eclipse, the next ringed eclipse in that saros cycle will happen on October 24, 2041, 18 years, 10 days into the future. * Yes, there are leftover fractions that cause the location of the next eclipse to occur about one-third of the Earth's circumference to the west. These fractional differences also mean that saros cycles have a beginning and an end, starting as partial eclipses at either the north or south poles, then annular eclipses, sometimes hybrids (annular/total), total solar eclipses, and proceeding in reverse order until the saros cycle is complete, at the opposite pole. The Babylonians most likely discovered the saros cycle, the secret to predicting eclipses, from their extensive observations of the synodic or phase period of the moon. Ad Astra!

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Moravian University Astronomy - astronomy.org

FOR SALE! LIGHTLY USED CELESTRON TELESCOPE/MOUNT SYSTEM

LIGHTLY USED CELESTRON TELESCOPE/MOUNT SYSTEM
Celestron Advanced VX Mount (purchased 2017)
-Many features for star finding (>40,000 objects)
- Autoguider to keep object centered
- See https://www.celestron.com
Celestron C102-HD Refractor Telescope (purchased ~1997)
- 102 mm dia, 1000 mm focal length
- Finders scopes
- Orion 9x50 Right Angle, Correct Image
- Telrad Reflex Sight
Many Eyepieces:
- Orion Stratus Wide Field 1.25"/2"
- Meade Plossl: 5.5, 12.5, 20, 25 mm
- Filters: Moon, Polarizer, Cel. No. 8
- Thousand Oaks Optical 4 Channel Dew Heater control and heating straps
Orion Carrying Case for eyepieces +
Golf outer bag for holding everything
Total retail value about $2000
Asking $1,000 (price reduced)
Will sell mount and telescope (with original manual equatorial mount) separately
- Call for separate pricing

Jim Farrand
610-216-3438
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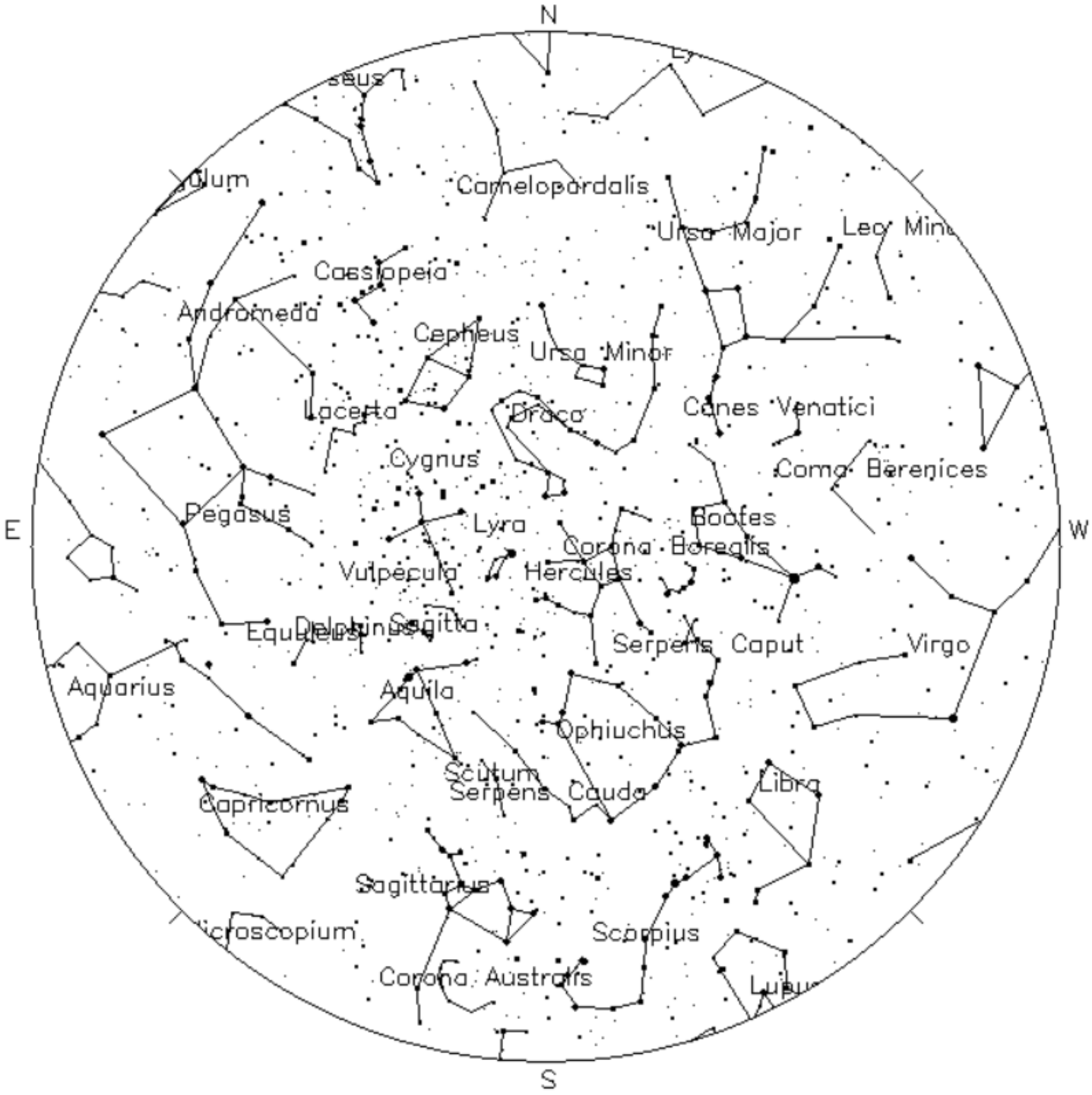
OCTOBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
01	02	03	04	05	06 Last Quarter Moon Scout Camping at Pulpit Rock	07 Scout Camping at Pulpit Rock
08 Scout Camping at Pulpit Rock General Meeting - 7:00 PM	09	10	11	12	13 Stargazers Group Meeting	14 New Moon Astroimaging Meeting - 7:00 PM canceled
15	16	17	18	19	20	21 First Quarter Moon Star Party
22 Deadline for submissions to the Observer	23	24	25	26	27	28 Full Moon
29 LVAAS Board of Governors Meeting	30	31				

NOVEMBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			01	02	03	04
ast Quarter Moon 05	06	07	08	09	10 Stargazers Group Meeting	11 Veterans Day Astroimaging Meeting - 7:00 PM
eneral Meeting - 2:00 M 12	13 New Moon	14	15	16	17	18 Star Party
eadline for ubmissions to the bserver 19	20 First Quarter Moon	21	22	23 Thanksgiving	24	25
VAAS Board of overnors Meeting 26	27 Full Moon	28	29	30		

Sky Above 40°33'58"N 75°26'5"W Thursday October 5 2023 00:00 UTC



Your Sky was implemented by John Walker in January and February of 1998. The calculation and display software was adapted from Home Planet for Windows. The GIF output file generation is based upon the ppmtogif module of Jef Poskanzer's pbmplus toolkit, of which many other components were used in creating the images you see here.

ppmtogif.c - read a portable pixmap and produce a GIF file

Based on GIFENCOD by David Rowley

Lempel-Zim compression based on "compress"

Modified by Marcel Wijkstra

Customize *Your Sky at* http://www.fourmilab.ch/yoursky/

2023 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2023 LVAAS Event Calendar												
	Sundays				Saturday		Multi-Day Weekends	Moon Phase				
	General Meeting time	location	Board meeting	Astro-Imaging	Star Parties	Scouts at S. Mountain	Scouts at Pulpit R.	New	1st	Full	3rd
January	8	3:00 PM Muhlenberg	29	no meeting	no meeting		no camping	21	28	6	14
February	5	3:00 PM Muhlenberg	26	no meeting	no meeting		no camping	20	27	5	13
March	12	3:00 PM Muhlenberg	26	no meeting	25		no camping	21	28	7	14
April	2	7:00 PM S.M.	30	22	29			20	27	6	13
May	7	7:00 PM S.M.	21	20	27			19	27	5	12
June	11	7:00 PM S.M.	25	10	24			18	26	3	10
July	8	5:00 PM S.M.	30	15	22			17	25	3	9
August	12	7:00 PM Pulpit	27	19	26			16	24	1 & 30	8
September	10	7:00 PM S.M.	24	9	23			14	22	29	6
October	8	7:00 PM S.M.	29	Canceled 14	21			14	21	28	6
November	12	2:00 PM S.M.	26	11	18			13	20	27	5
December	9	2:00 PM ?	17	16	no meeting		no camping	12	19	26	5

July, Aug & Dec are Saturday meetings with rain date on Sunday
Jan, Feb & March meetings are at Muhlenberg College
August meeting is at Pulpit Rock
December meeting / Holiday Party (TBD)

NEAF	4/15 – 4/16
MEGA MEET	8/11-- 8/13
CSSP	6/15 – 6/18
Stellafane	8/17 – 8/20
BFSP	9/15 – 9/17 ??

"Fear no more the heat o' the sun
Nor the furious winters' rages
Thou thy worldly task hast done
Home art gone, and ta'en thy wages
Golden lads and girls all must
Chimney-sweepers, come to dust
The sceptre, learning, physic, must
All follow this, and come to dust..."

~ Shakespeare

Publishing images is a balancing act!

When preparing your images for publication in The Observer, please consider the following guidelines:

Put the quality in:

- Considering the "print" size of the image, make sure you have at least 150 pixels/inch.
- Use a reasonably good quality for the JPEG compression ratio.

But watch the "waistline"!

- Don't go too much above 200 pixels/inch max.
- Use the lowest JPEG quality that still looks good!
- Shoot for <300KB for a 1/2 page image or <600KB for a full page.

Tip: If you're not Photoshop-savvy, you can re-size and compress undemanding images ("human interest" not astroimages), with an online tool such as: https://www.ivertech.com/freeOnlineImageResizer/freeOnlineImageResizer.aspx. It will also tell you the pixel size and file size of your original, even if you don't download the processed copy.

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No images of people under 18 years of age will be accepted for publication at this time. Articles submitted prior to the Sunday before the monthly meeting of the board of governors (please see calendar on website) will appear in the upcoming month's issue. PDF format is preferred. Early submissions are greatly appreciated. Articles may be edited for publication. Comments are always welcome. Document proofread by Rich Hogg on a monthly basis.

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Every effort will be made to properly credit the sources of the material used in this publication. If additional credit is required, please notify the editor at observer@g.lvaas.org

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